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Visualisation in climate services

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Climateurope webinar
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S2S4E project has received funding from the Horizon 2020 programme under grant agreement n°776787. The research leading to these results is part of the Copernicus Climate Change Service (C3S) (Contract number: C3S_429g_BSC), a programme being implemented by the European Centre for Medium-Range Weather Forecasts (ECMWF) on behalf of the European Commission. The content of this presentation reflects only the author's view. The European Commission is not responsible for any use that may be made of the information it contains.

Opinion

How Scientists Got Climate Change So Wrong

Few thought it would arrive so quickly. Now we're facing consequences once viewed as fringe scenarios.

By Eugene Linden

Mr. Linden has written widely about climate change.

Nov. 8, 2019



Opinion

How Scientists Got Climate Wrong

Few thought it would arrive so quickly. Now we see the consequences once viewed as fringe scenarios

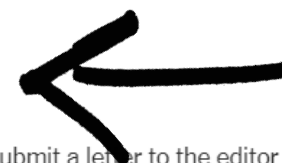
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Comments 2070



The comments section is closed. To submit a letter to the editor for publication, write to letters@nytimes.com.

NYT Picks

Reader Picks

All



Donald Criss

 Times Pick

Munday, WV | Nov. 10, 2019

Your article seems to suggest climate scientists have gotten it wrong by underestimating the severity of the consequences climate change would bring about. Not so much. Many scientists, myself included, viewed the dire predictions generated by computer models and empirical data with great concern over the last three decades. The news got worse with each iteration of the climatic models, painting a picture no one wanted to see and suggested remedies no one wanted employ. The dire consequences of climate change is is not fringe alarmist ranting; it is reality. The notion that if scientists had only given adequate warning, action would have been taken does not reflect reality. Scientist are concerned with assembling and interpreting facts, not motivated by a perceived need for consensus. Failure to address the problem is the result of bureaucratic caution and politics based on short-term economic gains for the wealthy few.

[24 Replies](#) [3137 Recommend](#) [Share](#)

[Flag](#)



CitizenJ

 Times Pick

Nice town, USA | Nov. 10, 2019

Please. The problem is not that scientists got something wrong. The problem is that climate change denialists went to work soon after scientists started urgent warnings. They are still at work

1990

SO, THIS CLIMATE
CHANGE THING
COULD BE A PROBLEM...



1995

CLIMATE CHANGE:
DEFINITELY A
PROBLEM.



2001

YEP, WE SHOULD
REALLY BE GETTING
ON WITH SORTING THIS
OUT PRETTY SOON...



2007

LOOK, SORRY TO SOUND
LIKE A BROKEN RECORD
HERE...



2013

WE REALLY HAVE
CHECKED AND WE'RE
NOT MAKING THIS UP.



2019

IS THIS
THING ON?



KOPRA
28/9/13

There is
NO Planet B

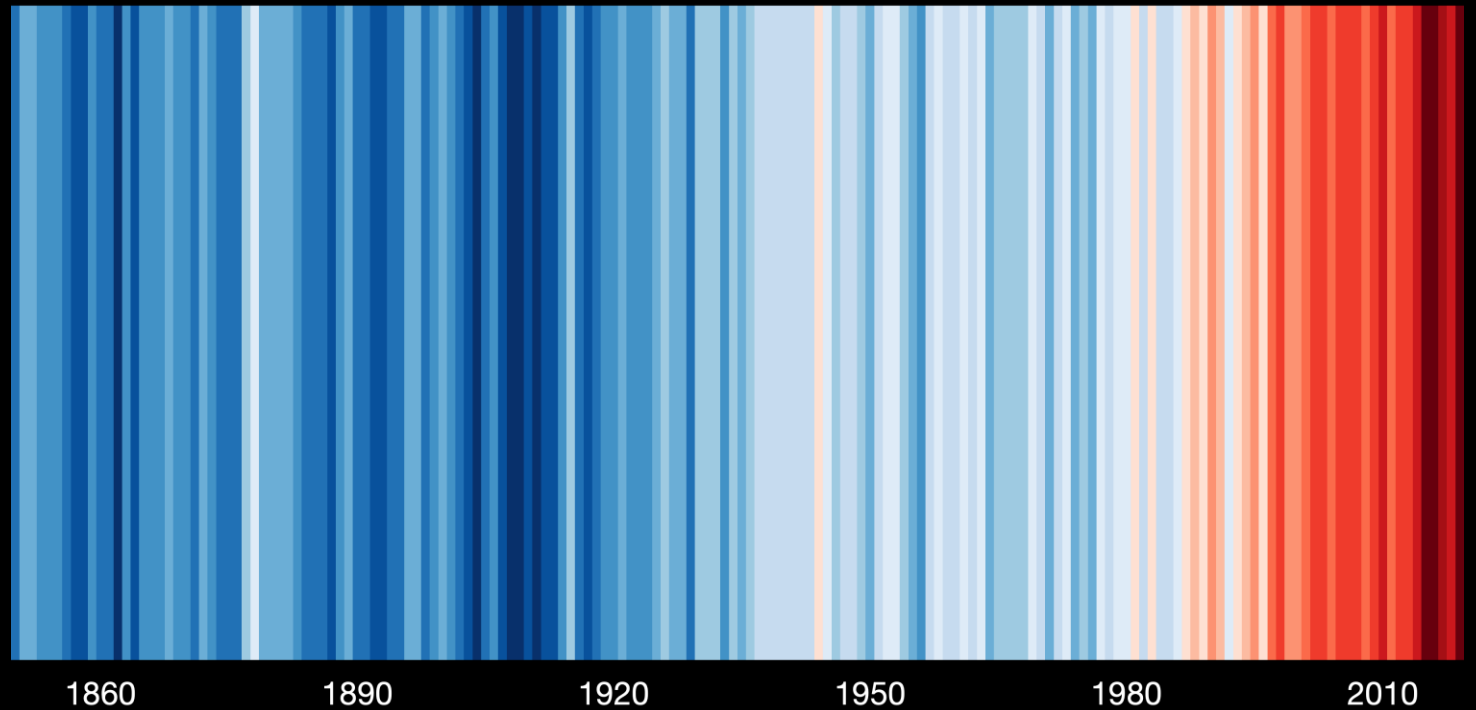


NARRATIVES

VISUALS

#ShowYourStripes

Global temperature change (1850-2019)



Not only for
broad audiences...

Policy makers



Industry



Civil protection



... and many more

Engage them
Raise Awareness
Trigger action



**ACTIONABLE
INFORMATION**

Climate Services

Lourenço et al. (2016) Nature Climate Change

opinion & comment

COMMENTARY:

The rise of demand-driven climate services

Tiago Capela Lourenço, Rob Swart, Hasse Goosen and Roger Street

With the concept of climate services rapidly climbing research and research-funding agendas worldwide, the time is ripe for a debate about the objectives, scope and content of such services.

Over the past decade, multiple frameworks and agendas have been proposed for climate services^{1–7}. These initiatives have tried to keep up with an ever-growing knowledge base, a more informed appreciation of the importance of climate for decision-making, and a greater demand for all sorts of climate-related

The Climate Services Roadmap⁷ recently launched by the European Commission takes on a broader perspective where climate services can cover the “transformation of climate-related data — together with other relevant information — into customised products [...] and any other service in relation to climate that may

Comprehensive information about existing climate services is not readily available, suggesting that a market for such services and products may be growing slowly or not at all. It has been suggested that the current business area is relatively small, in both number and size of involved organizations², and/or too fragmented⁴.



Three examples of visualisations for climate services



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- 1. Can we add more information?**
- 2. WOW factor**
- 3. Let's be practical**

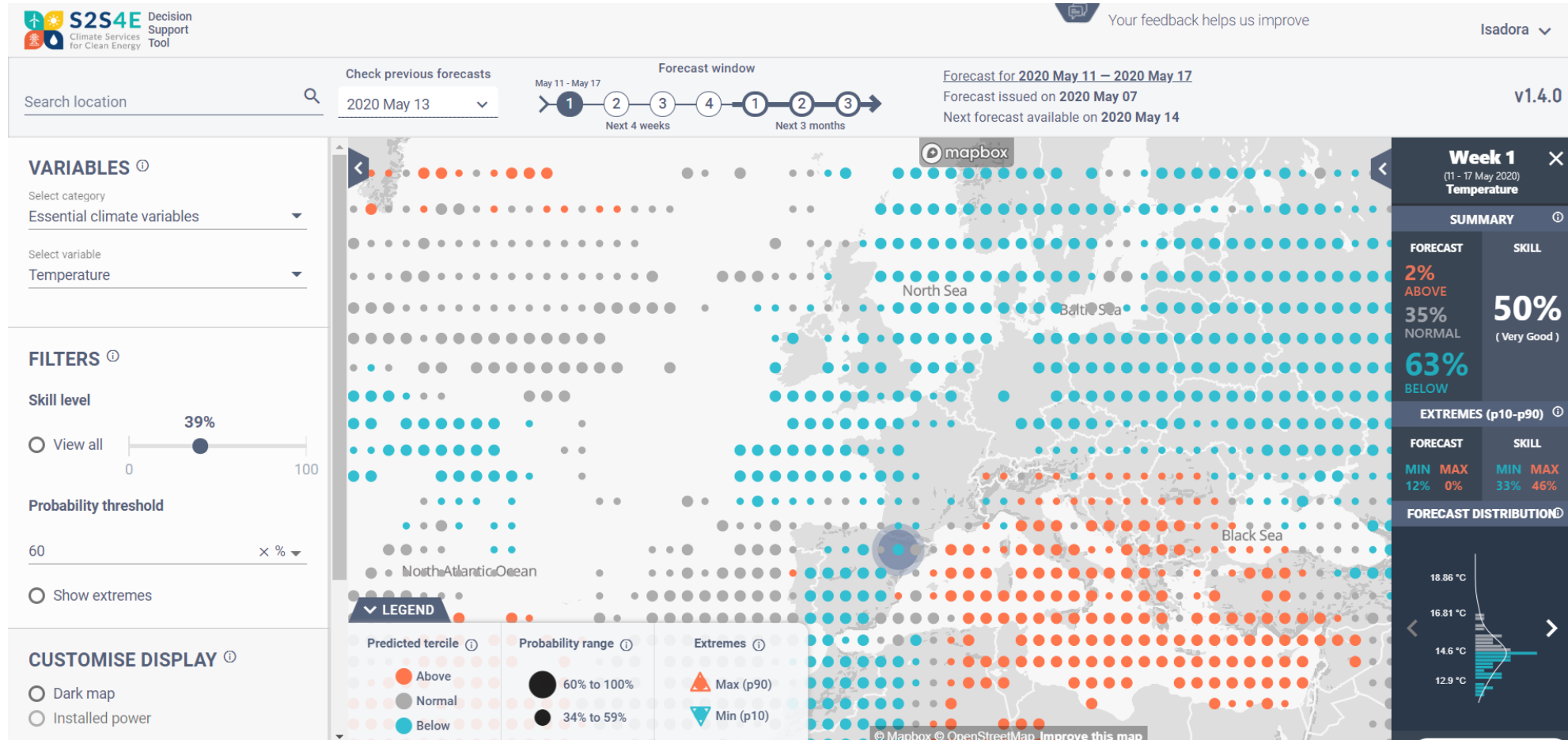


S2S4E
Climate Services
for Clean Energy

www.s2s4e.eu/dst



@S2S4E



Something we learned

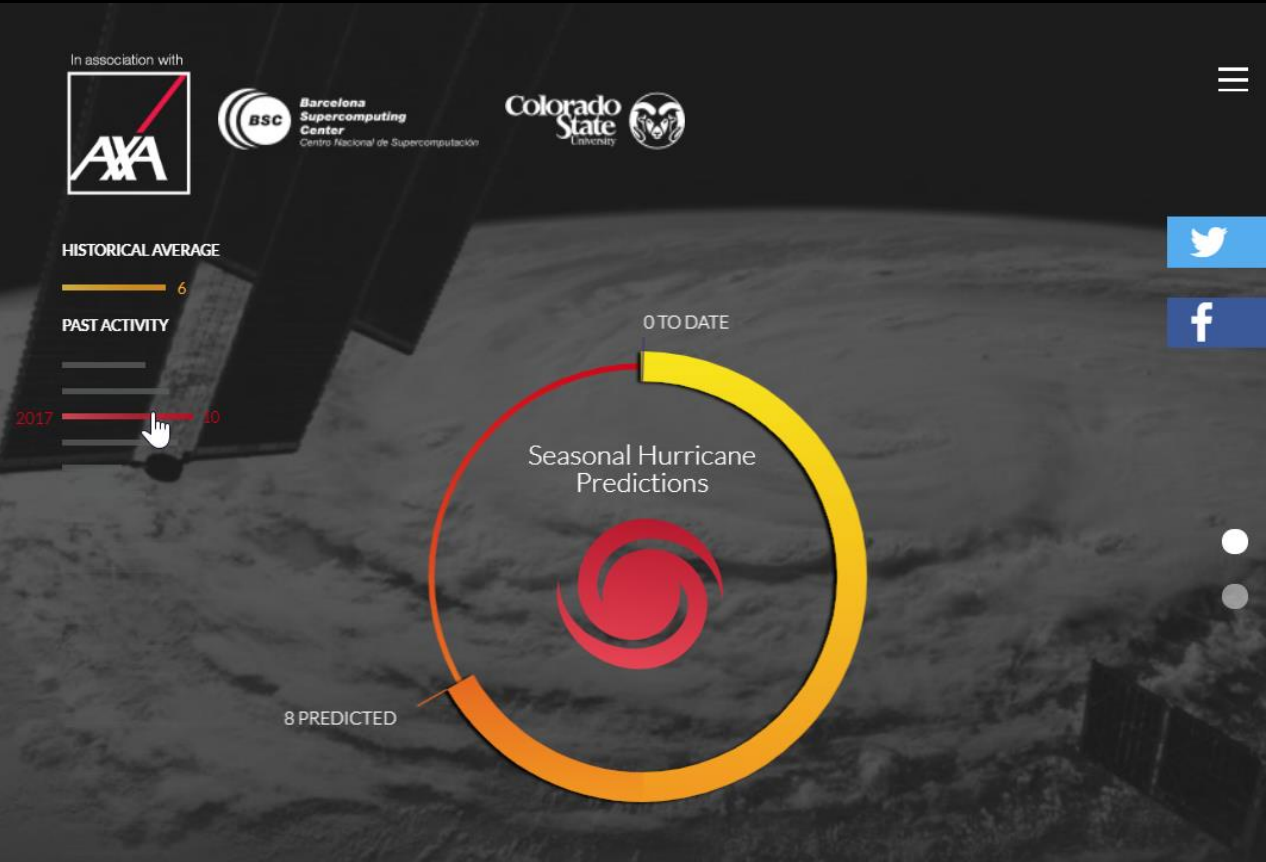
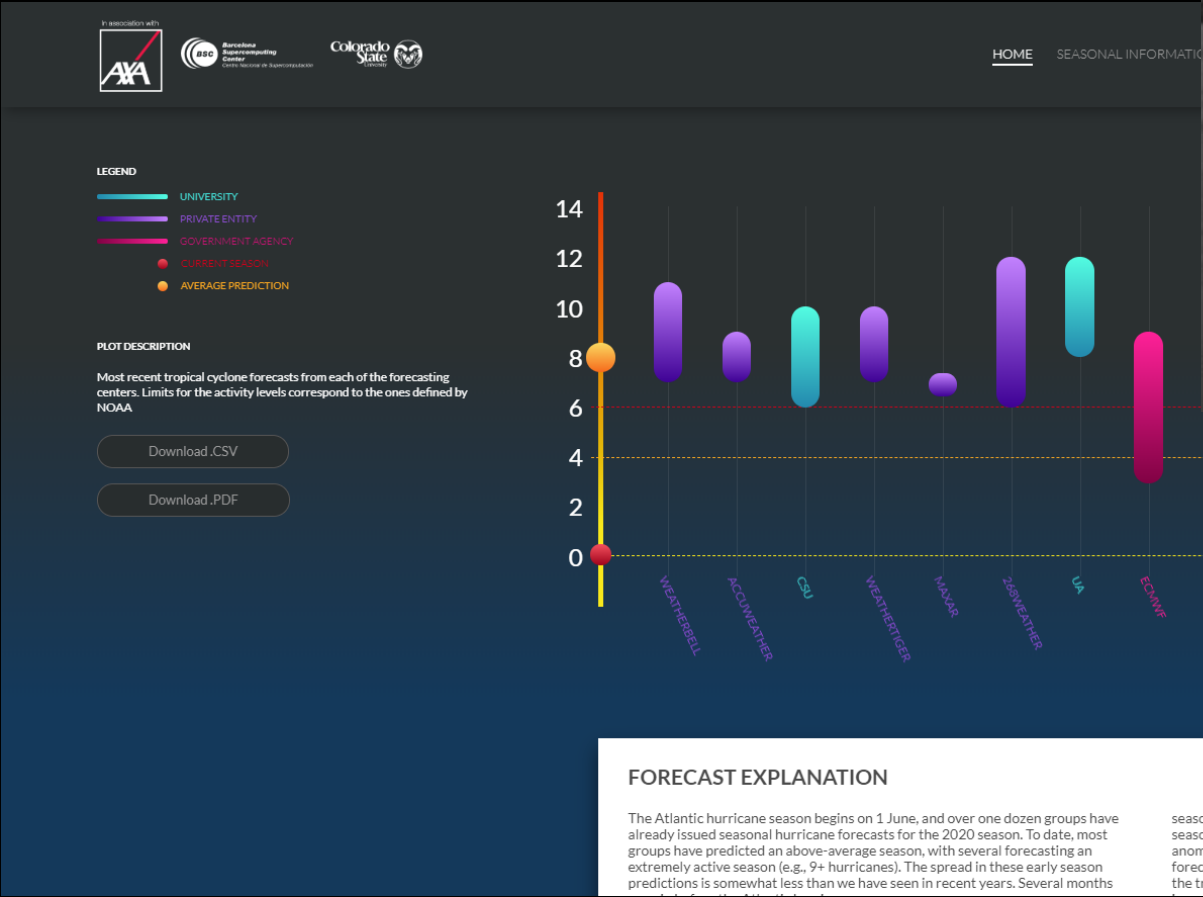


Interacting with information is key

There is still a lot to do to make
information really actionable

1. Can we add more information?
2. WOW factor
3. Let's make it simple

www.seasonalhurricanepredictions.org



Something we learned



Colors also matter

A service sometimes can be as simple as gathering all relevant information in the same place

1. Can we add more information?
2. WOW factor
3. Let's make it simple



Copernicus Climate
Change Service

FULL, FREE AND OPEN
ACCESS TO DATA



-  ATMOSPHERE MONITORING
-  MARINE ENVIRONMENT MONITORING
-  LAND MONITORING
-  CLIMATE CHANGE
-  EMERGENCY MANAGEMENT
-  SECURITY

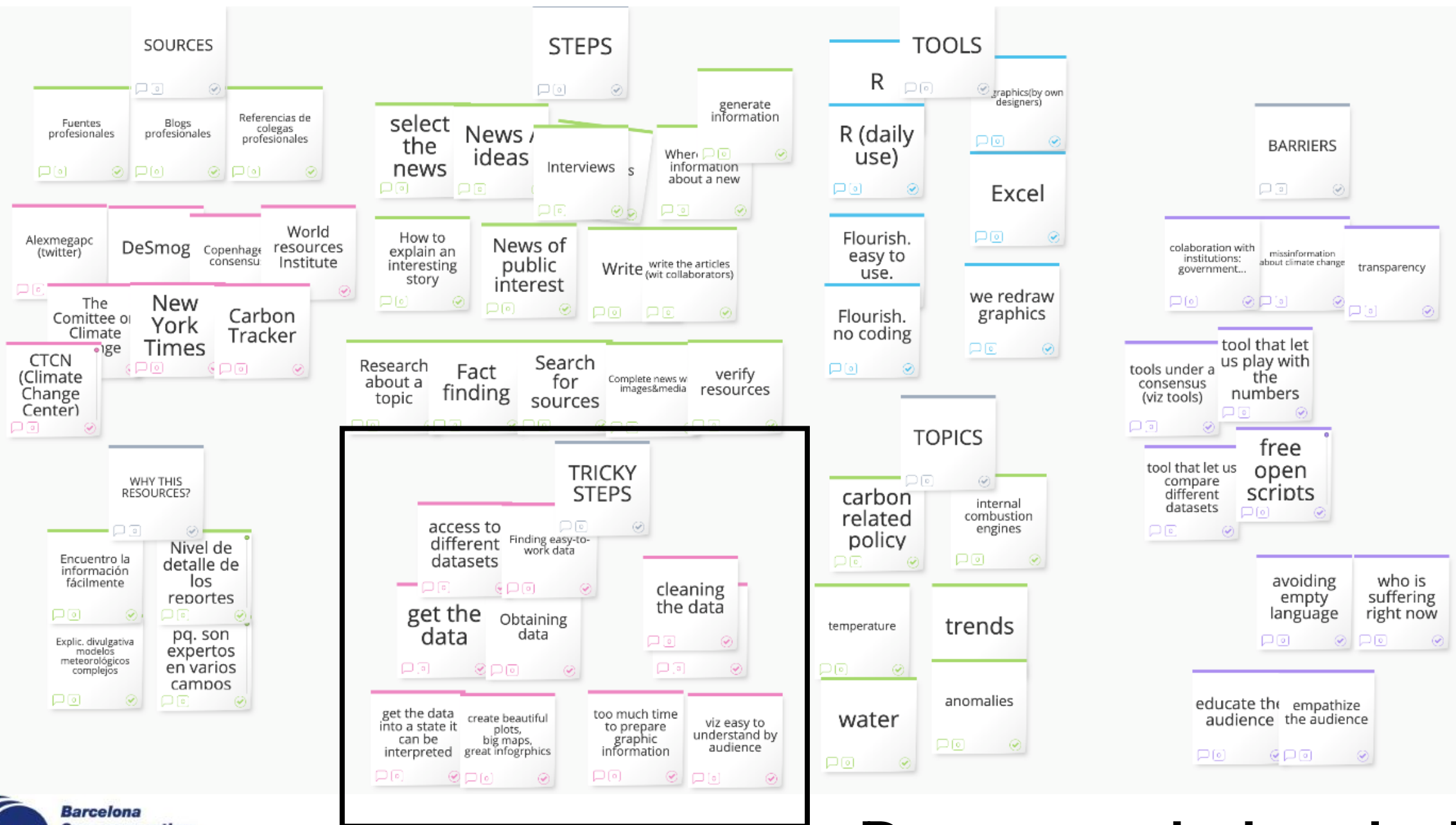
 **opernicus**
Europe's eyes on Earth

Climate Data Store

The screenshot shows the homepage of the Climate Data Store. At the top, there is a header with logos for the European Union, Copernicus, ECMWF, and Climate Change Service. A navigation bar below the header contains links for Home, Search, Datasets, Applications, Toolbox, FAQ, and Live. A 'Login/register' button is located in the top right corner. The main content area features a welcome message: 'Welcome to the Climate Data Store. Dive into this wealth of information about the Earth's past, present and future climate. It is freely available and functions as a one-stop shop to explore climate data. Register for free to obtain access to the CDS and its Toolbox. We are constantly improving the services and adding new datasets. For more information, please consult the catalogue, our FAQ or the C3S forum.' Below this text is a search bar with the placeholder 'Enter search term(s)', a dropdown menu set to 'All', and a 'Search' button. At the bottom of the main content area, there are three featured links: 'Climate Data Store Toolbox' (with a line graph icon), 'Climate Data Store API' (with a code snippet icon), and 'Access the C3S Forum' (with a blue globe icon). The footer contains links for 'About C3S', 'Contact us', 'Cookies', 'Disclaimer', and 'Privacy', along with logos for the European Union, Copernicus, and ECMWF.

<https://cds.climate.copernicus.eu/>

User Experience research

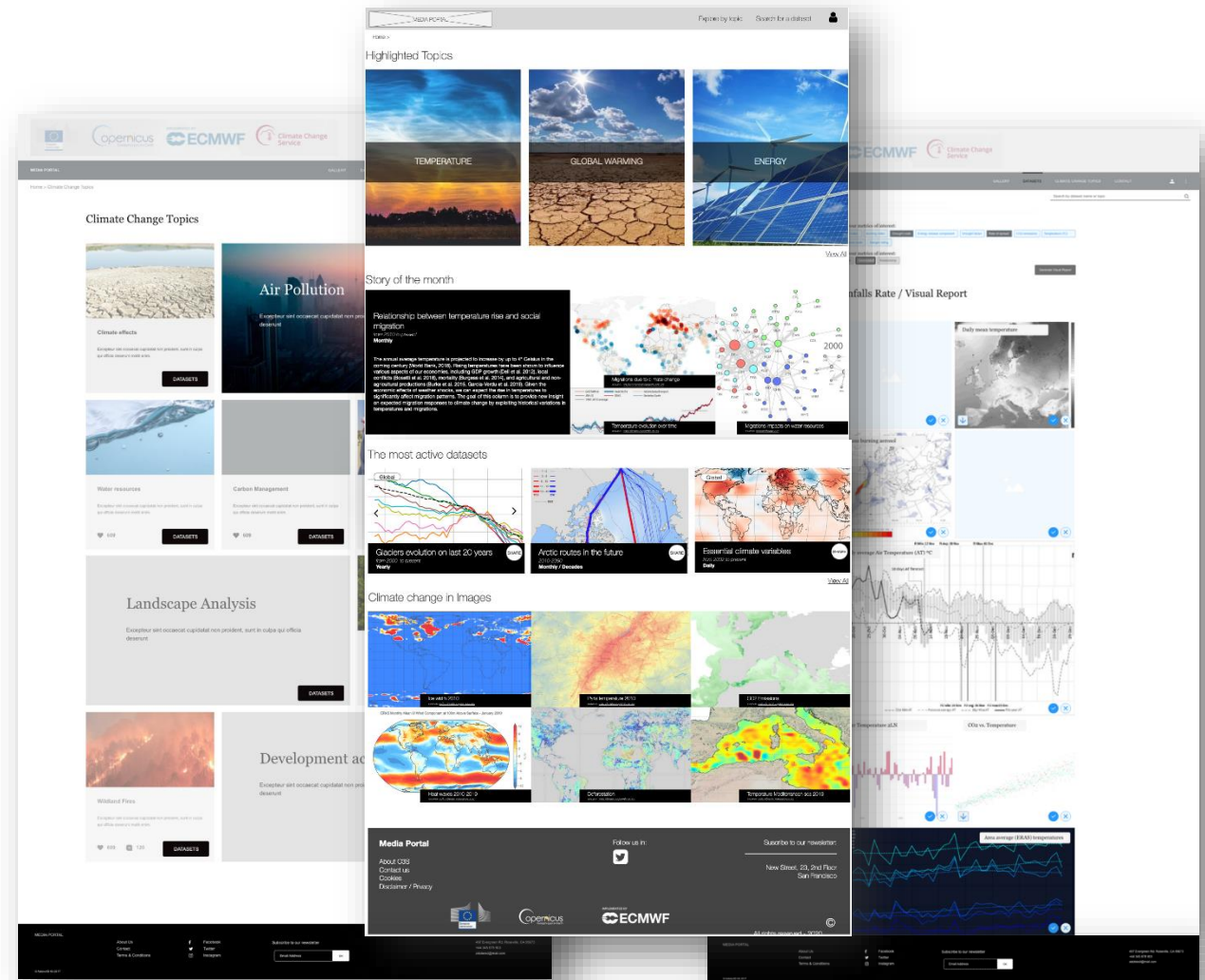


... Data was their priority

Want to test it?

It takes 15 minutes

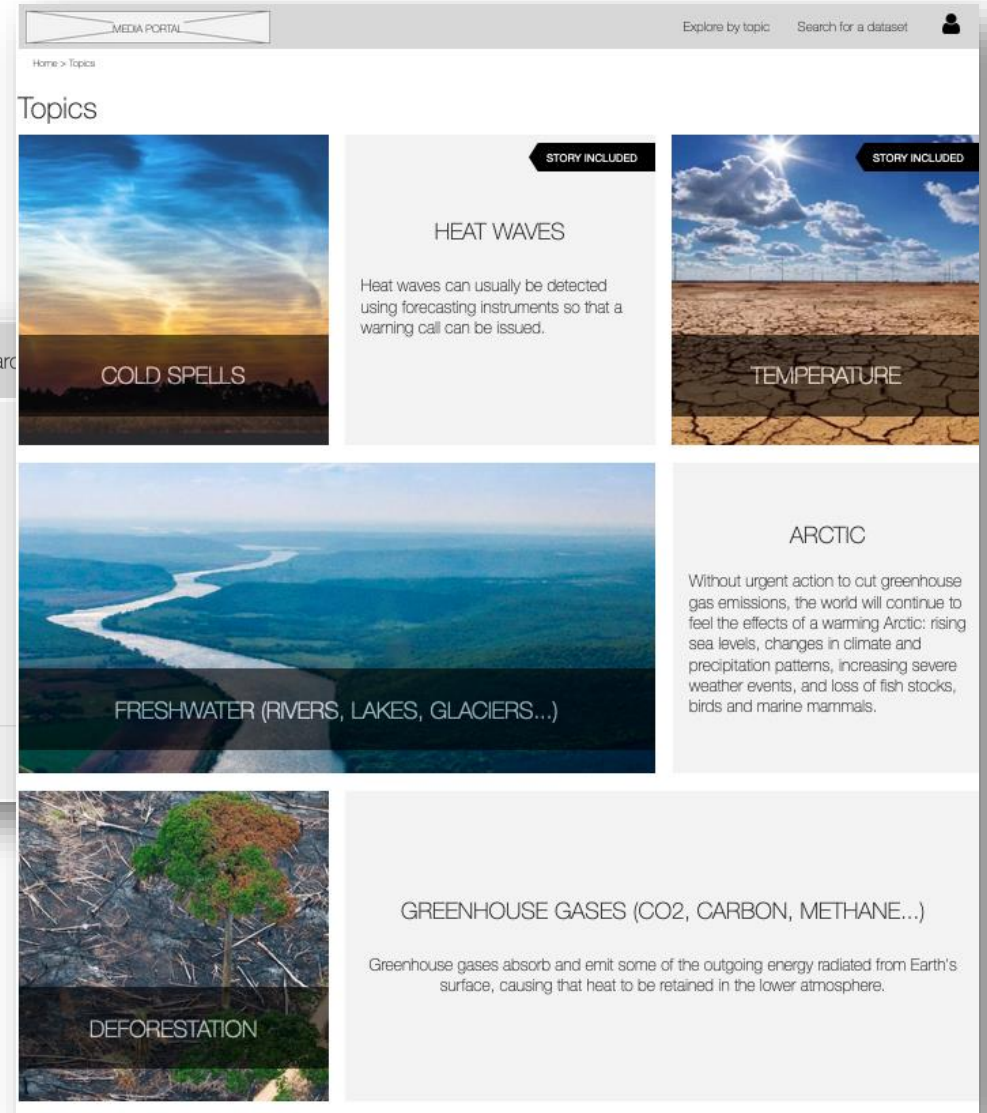
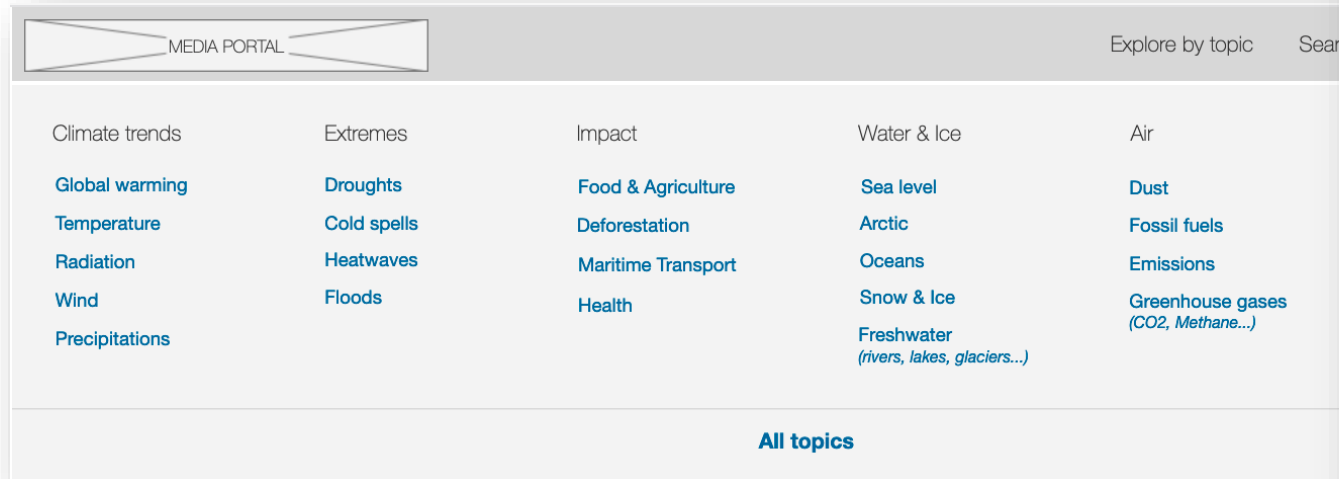
<https://bit.ly/2WNNMbYY>



Or write me if you want to provide more feedback during the development

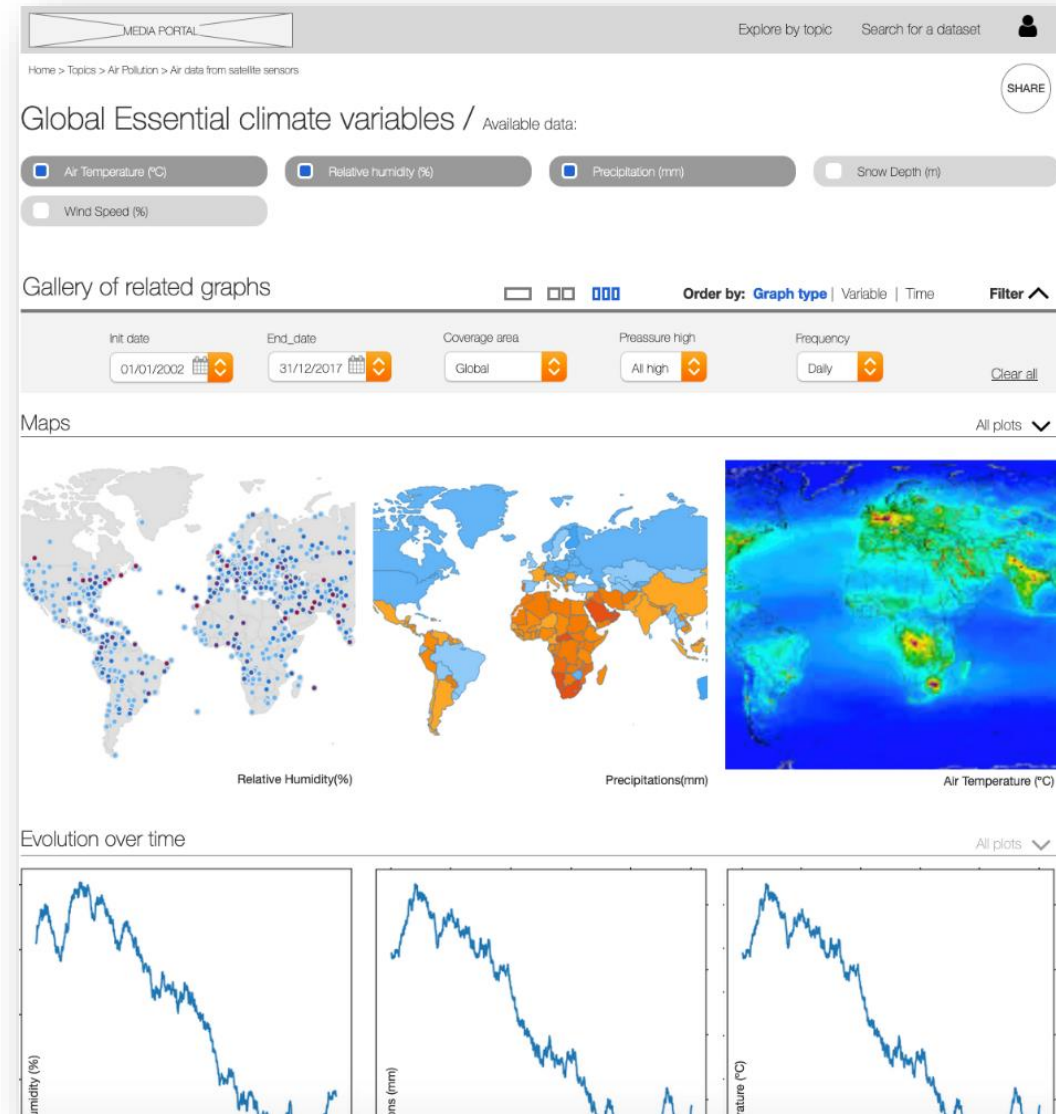
Isadora.Jimenez@bsc.es / @isadorachristel

Finding ideas for articles by exploring by topic



Exploring visually a selected topic

Downloading BOTH graphics or data



Something we learned



Try control your preconceived ideas

User research and testing functionalities
has priority over design

THANK YOU
and remember...



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Interacting with information is key

Colors also matter

Try control your preconceived ideas

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THANK YOU

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